COASTAL CONSERVANCY

Staff Recommendation
December 4, 2008

FIVE COUNTIES FISH PASSAGE AND WATER QUALITY IMPROVEMENT PROGRAM: PLANNING GRANT

File No. 08-146
Project Manager: Michael Bowen

RECOMMENDED ACTION: Authorization to disburse up to $500,000 to the Northwest California Resource Conservation and Development Council to design, permit, and prepare for implementation at least ten fish passage improvement projects and five associated water quality improvement projects in the counties of Del Norte, Humboldt, Mendocino, Trinity, and Siskiyou.

LOCATION: Coastal watersheds within the Five Counties program area (Exhibit 1).

PROGRAM CATEGORY: Resource Enhancement

EXHIBITS

Exhibit 1: Project Location and Site Map

Exhibit 2: Proposed priority project list

Exhibit 3: Progress report on previously funded projects

Exhibit 4: Project Letters

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31251-31270 of the Public Resources Code:

"The State Coastal Conservancy hereby authorizes the disbursement of up to five hundred thousand dollars ($500,000) to the Northwest California Resource Conservation and Development Council ("Council") for the preparation of engineering, design, environmental and permitting documentation for fish passage improvement and water quality improvement projects ("Program"). Prior to the commencement of work, the Council shall submit for the review and approval of the Executive Officer of the Conservancy a work program, schedule for completion, project budget, and the names and qualifications of any contractors to be employed in the preparation of the Program."

Staff further recommends that the Conservancy adopt the following findings:

"Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed authorization is consistent with Chapter 6 (Sections 31251-31270) of Division 21 of the Public Resources Code regarding the enhancement of coastal resources.
2. The proposed authorization is consistent with the Project Selection Criteria and Guidelines adopted by the Conservancy on September 20, 2007.
3. The Northwest California Resource Conservation & Development Council is a non profit organization existing under section 501(c)(3) of the Internal Revenue Code, and whose purposes are consistent with Division 21 of the Public Resources Code."

PROJECT SUMMARY:

Staff recommends the Conservancy authorize the disbursement of up to $500,000 to the Northwest California Resource Conservation and Development Council ("Council") to design, permit, and prepare for implementation at least ten fish passage improvement projects and five associated water quality improvement projects, in the counties of Del Norte, Humboldt, Mendocino, Trinity, and Siskiyou. This authorization will enable the Council to continue improving fish passage and water quality in streams where barriers to fish passage and long-term sediment input from roads have resulted from the inappropriate design and construction of road-related stream crossings. Such efforts to date have measurably and demonstrably increased and improved coastal salmon habitat quality and quantity. Project sites will be derived from the Council's Five Counties Salmonid Conservation Program ("5C Program") Fish Passage and Sediment Reduction Priority Project List (Exhibit 2).

Historically, road-stream crossings were constructed with culverts or other structures that prevented the upstream passage of anadromous fish, such as salmon, steelhead, and coastal cutthroat trout. Blocking thousands of miles of historic habitat, these culverts prevent fish from ascending numerous streams due to excessive heights between culvert outlets and plunge pools below, and impassably high flow velocities within the culverts themselves. Fish capable of ascending barriers are often too fatigued to spawn. Fish prevented from ascending such culverts typically congregate in discharge pools below the culvert, where they may fall prey to predators or poachers.

Moreover, like much public infrastructure, road-stream crossings are often in a state of decay, and pose a severe financial challenge to rural economies, as well as to coastal watersheds. Failing culverts can cause road fill failures, landslides, and can introduce thousands of cubic yards of fine sediment into watersheds at a time when State and Federal agencies are expending millions to improve water quality by reducing erosion and controlling sediment inputs.

Many barriers to fish passage are identified in the Conservancy's report, "Inventory of Barriers to Fish Passage in California's Coastal Watersheds," as well as in the subsequently funded Passage Assessment Database ("PAD"). Together, these resources enable the Council, local governments, and others to prioritize fish passage improvement projects on criteria such as miles of habitat blocked, risk of failure, and other factors.

Formerly housed within Trinity County, and a prior recipient of Conservancy funding for such work, the Council's 5C Program is an official association of counties sharing in common the desire to provide for the conservation and restoration of salmonid populations to healthy and sustainable levels in coastal streams. The 5C Program largely pioneered the field of fish passage

improvement in California, particularly in coastal watersheds and on county roads. The Program's earlier barrier assessments and project prioritization directly led to the implementation of 29 projects between 1999 and 2002, nine of which received partial construction funding from the Conservancy. The work of the 5C Program is well known, and the 5C Program is a recipient of the EPA's Clean Water Partnership for the 21st Century award, as well as a certificate of special Congressional Recognition.

Fish passage and water quality improvement projects provide proponents with the opportunity to recover coastal salmon populations, improve and modernize local roads, diminish future maintenance costs, and provide much needed design and construction jobs in areas frequently beset by high unemployment rates and lack of financial resources. This combination of benefits has made county governments, and others, keen participants in fish passage improvement and sediment reduction projects. However, the ability of local governments to implement fish passage improvement and sediment reduction projects is hampered by the inability of local government staff to effectively design, seek grant funding for, and eventually permit promising projects due primarily to low staffing levels. This grant would expedite the design and permitting of a block of fish passage improvement and sediment reduction projects, thereby expediting the recovery of quality habitat for anadromous fish and other aquatic species found in coastal watersheds.

If this authorization is approved, the Council's 5C Program, previously housed within Trinity County, will design and prepare permits for a series of high priority fish passage and water quality improvement projects. The Council's 5C Program will then direct and oversee the development of these projects, and seek additional funds from a variety of sources, including the Conservancy, for implementation.

Site Description: Project development will be limited to anadromous fish-bearing streams in the Program's service area (Exhibit 1), including Del Norte, Humboldt, Mendocino, Siskiyou and Trinity Counties. Specific watersheds and project sites, drawn from the Priority Project List (Exhibit 2) will be identified in the work plan, subject to the approval of the Conservancy's Executive Officer.

Project History: Facing increasingly stringent land use regulations stemming from the collapse and resulting Endangered Species Act listing of Coho Salmon, the Counties of Del Norte, Humboldt, Mendocino, Siskiyou, and Trinity agreed in 1997 to collaborate on a proactive response to the federal listing of coho salmon as a threatened species by forming the Five Counties Salmonid Conservation Program ("5C Program"). The goal was to seek opportunities to contribute to the long-term recovery of salmon and steelhead in northern California. The objectives were to: evaluate options for improving county plans, policies, and practices to provide or improve salmonid habitat; identify areas where counties might be vulnerable to challenges under the ESA; and upgrade training programs and recovery project monitoring and reporting procedures. Initial meetings identified: causative factors of salmonid declines, including how county infrastructure, practices and policies contributed to that decline; information gaps on limits to salmonid recovery; and priority tasks required to obtain missing information necessary for concerted recovery efforts. Two high-priority tasks included

conducting stream crossing culvert inventories to evaluate fish passage and identifying sediment sources on county roads to prioritize projects and treatments.

The inventories and fish passage evaluations of stream crossing culverts within the five counties' road systems were conducted between 1998 and 2002 with additional inventories conducted in Mendocino, Del Norte and Humboldt counties in 2004. The objective was to assess passage of juvenile and adult salmonids and develop project scheduling documents to prioritize corrective treatments that would provide unimpeded fish passage. The inventories were limited to county-maintained stream crossings within anadromous stream reaches known to historically and/or currently support runs of coho salmon (*Oncorhynchus kisutch*), chinook salmon (*O. tshawytschia*), and/or steelhead (*O. mykiss irideus*).

During that same time, and in response to an appropriation from the Salmon Habitat Restoration Program, sponsored by Senator Byron Sher (District 11), the Conservancy conducted an extensive and first-of-its-kind inventory of existing fish passage barrier data for coastal California streams. In addition to identifying more than 16,000 potential barriers to fish passage, including nearly 500 high priority barriers, the authors of the report learned that, despite local willingness to pursue fish passage improvement projects, project implementation was limited by the inability of local public entities to design and permit their proposed projects. Therefore, despite available grant sources for implementation, local public entities lacked sufficient funds or staffing for project development.

The first DIRT (Direct Inventory of Roads and Treatments) inventories were fully completed in 2000 in Mendocino and Trinity Counties. Since that time, inventories have been completed in portions of Humboldt and Siskiyou counties with Del Norte now fully complete. Since it is commonly recognized that erosion problems associated with road systems represent a threat to salmonid population recovery, examining sediment sources on county roads was listed as a priority in the 1998 UCCE assessment of the five counties (along with the inventory of county barriers to fish passage). Roads modify natural hillslope drainage networks and accelerate erosion processes that can have biological consequences that affect virtually all components of stream ecosystems, but are one of the most easily controlled sources of sediment production. The 5C Program is committed to a long-term, systematic, prioritization-based sediment reduction program to improve water quality and salmonid habitat. The 5C road erosion inventories identify specific sites along county roads and facilities that contribute sediment to waterways and prioritize treatments to assure economic, biological, and management effectiveness. Final prioritization is based on various factors obtained directly from DIRT such as treatment immediacy, sediment delivery volumes, and likelihood of delivery to a stream. Other prioritization factors include but are not limited to current water quality violations, TMDL criteria, cost effectiveness, biological considerations of anadromous salmonids, and subsequent scheduling of county capitol improvement and maintenance projects.

During the course of these assessments, the 5C Program matured from a loose affiliation of county, agency, and nonprofit staff to a formal fisheries restoration and water quality improvement program administered through the County of Trinity, a non-coastal county adjoining two coastal counties, and highly dependent upon the fishery resources of the Trinity River, the largest tributary in the Klamath River watershed. Since its formation, the 5C Program

has now left the administrative umbrella of Trinity County, and is under administration of the Northwest California Resource Conservation and Development Council, a non-profit community development corporation. The 5C Program has retained the same staff, background, expertise, and affiliations to take fish passage improvement and sediment reduction efforts to a more ambitious level.

The Conservancy has provided a series of design and implementation grants to the 5C Program via the County of Trinity, including two project design grants and one implementation grant. These two planning grants contributed to the design, permitting and cost estimates for improving 26 migration barriers on private, county, State and federal lands within Mendocino, Humboldt, Del Norte and Trinity counties. Of these 26 projects, eight were constructed between 2005-2007, four were completed in 2007 and three are in construction in 2008. The remaining eleven projects are ready for construction at any time. The projects, at completion, will restore access to 49 miles of spawning and rearing habitat for salmonids, will prevent 42,932 cubic yards of sediment delivery from failed culvert crossings and will reduce transportation maintenance activities, and associated costs, during high storm flows. Funds from the Conservancy's planning grants contributed to leveraging an additional $2.5 million in engineering, permitting and construction of the eight projects that were constructed between 2005 and 2007. The background to and activites of 5C Program are described in greater detail in the introduction to the Progress Report on Previously Funded Projects (Exhibit 3). In total, the 5C Program has reopened a remarkable 130 miles of quality habitat for state and federally listed Pacific salmon.

Monitoring has been conducted at eight of twelve completed sites by a variety of entities, including the Department of Fish and Game, the United States Forest Service, and citizen groups. Recolonization at some of these sites has been almost instantaneous. Adult Coho salmon have spawned successfully above at least two of the former barriers.

As hoped with the original authorizations, and since the time of the original planning grants to the 5C Program, some of the counties have developed the capability within their own public works departments to design and implement projects unilaterally. Unfortunately, some still lack adequate staffing levels and expertise in this area. If approved, this authorization would facilitate project development and implementation in those counties where it is most needed, and provide a new focus on those watersheds and priority projects where enhancement needs are most urgent.

PROJECT FINANCING:

Coastal Conservancy	$500,000
Other sources	100,000
Total Project Cost	**$600,000**

The anticipated source of Conservancy funds is the fiscal year 2005-2006 appropriation to the Conservancy from the Water Security, Clean Drinking Water, Coastal Beach Protection Fund of 2002 (Proposition 50). Proposition 50 authorizes the use of funds for the purpose of protecting coastal watersheds through projects to acquire, protect and restore land and water resources that are undertaken pursuant to the Conservancy's enabling legislation.

The proposed project will accomplish these purposes by preparing necessary designs to restore fish passage and improve habitat for coho salmon and steelhead trout.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The proposed project is undertaken pursuant to Chapter 6 of Division 21 of the Public Resources Code, as follows:

Pursuant to §31251, the Conservancy may award grants to local public agencies and nonprofit organizations for the purpose of enhancement of coastal resources which, because of human-induced events, or incompatible land uses, have suffered loss of natural and scenic values. Consistent with this section, the proposed authorization provides funds to the Program to enhance coastal fishery resources disturbed by incompatible land uses, such as inappropriate culvert installation.

Pursuant to §31251.2(a), "In order to enhance the natural or scenic character of coastal resources within the coastal zone, the Conservancy may undertake a project or award a grant . . . to enhance a watershed resource that is partly outside of the coastal zone. . . ." Consistent with this section, the Program, which operates inside and outside of the coastal zone, requested Conservancy assistance with projects located within and outside the coastal zone. This assistance was sought in order to design and permit a series of projects intended to benefit salmon populations known to travel many miles upstream of the coastal zone boundary in order to fulfill their life history patterns. Indeed, salmon depend on unimpeded access to high quality habitat both within and outside of the coastal zone in order to survive. If salmon and other highly prized aquatic resources are to be maintained and restored to historic levels, funding must be provided to improve salmon habitat both within and outside the coastal zone. This section also requires the support of the California Department of Fish and Game. As one of the chief funders of the Program's projects, the Department is highly supportive of any authorization that furthers the objectives of the District. A support letter for this authorization from the Department is included in Exhibit 4.

As required by Section 31252, the proposed project is consistent with the Del Norte, Humboldt, and Mendocino Local Coastal Programs as described in the Consistency with Local Coastal Program Policies below.

Pursuant to §31253, "[t]he Conservancy may provide up to the total of the cost of any coastal resource enhancement project. . . ." Consistent with this section, the proposed contribution, intended for design and permitting, represents a small component of the future project cost.

CONSISTENCY WITH CONSERVANCY'S 2007 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 6, Objective C** of the Conservancy's 2007 Strategic Plan, the proposed project will provide at least ten of the sought 112 plans, fully designed and prepared for permitting and implementation, to remove barriers to fish passage.

Consistent with **Goal 6, Objective E** of the Conservancy's 2007 Strategic Plan, the proposed project will provide at least five of the 19 sought plans to improve water quality to benefit coastal ocean resources.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines, last updated on September 20, 2007, in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Support of the public:** Supporters of this authorization include the County members of the Program, Congressman Mike Thompson, Assembly member Patty Berg, Senator Patricia Wiggins, the Fish Passage Forum, Trout Unlimited, California Trout, Inc., and others. Letters of support are included in Exhibit 4.
4. **Location:** The proposed project would be located within and outside of the coastal zone in coastal salmon-bearing streams. By re-opening and improving historic habitat to coastal salmon, a species that migrates freely throughout coastal watersheds, the project will have a substantial benefit to coastal salmon resources by measurably increasing and improving available habitat, and increasing salmon populations now threatened with decline and in some cases extinction.
5. **Need:** Implementation funding for projects is often easily obtained, and is considered by many funders more appealing than providing funding for basic design work. However, no project may proceed without basic design work, and the Conservancy is one of the few funders willing to bridge the divide between concept and full implementation. Without the Conservancy spearheading project development, project implementation will be sparse and relatively ineffective on a statewide level.
6. **Greater-than-local interest:** The State is the sum of its parts, and few parts are more important to the health and well-being of the State than its coastal counties, coastal fisheries, and coastal communities that depend upon those fisheries. Substantial investments have been made in creative marketing for commercial fisheries, but absent abundant fisheries, a ready source of a high quality seafood product will, for practical purposes, disappear from our markets. Recovering coastal salmon populations to sustainable levels is of national interest, and California can and should play a major role in this effort. Reopening historic habitat while improving public infrastructure is an excellent way to achieve this goal.

Additional Criteria

7. **Urgency:** Recovery of salmon and steelhead populations listed under the federal or state Endangered Species Acts will only occur if the concerted removal of barriers to fish passage, and subsequent recolonization of historic range, proceeds expeditiously. As populations of anadromous salmonids decline statewide, the need is urgent to recover populations by widening the available range of the species by restoring historically accessible and high quality habitat. Given extremely low levels of coho populations, perhaps as low as 5,000

adults statewide, there is an urgent demand for projects that increase the available habitat and range for salmon.

8. **Resolution of more than one issue:** The proposed project enhances coastal resources while modernizing decaying infrastructure and providing much needed jobs to depressed rural economies.
9. **Leverage:** See the "Project Financing" section above.
10. **Innovation:** Different stream and infrastructure conditions require different technical approaches. Therefore, engineers working on these road-stream crossings employ and develop a host of new technologies that increase performance and reduce costs of construction and maintenance over time.
11. **Readiness:** The 5C Program has an excellent track record of performance in this area, and the Council is a proven administrator of comparable resource enhancement programs in northwest California.
12. **Cooperation:** All projects identified in the work program will require the concurrence and cooperation of a variety of participants, including local governments, landowners, and permitting agencies.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

The proposed authorization will include sites from at least five northern California counties, three of which have certified Local Coastal Programs (LCP), and two of which lie outside of the coastal zone. Consistency with the three certified LCPs as discussed below. Work sites will be located within and outside of the coastal zone. However, the aquatic resources and habitat quality of stream channels within and outside of the coastal zone boundaries are inextricably linked. Barriers to fish passage affect coastal resources regardless of barrier location within the watershed. The anadromous fish populations that spend part of their life history within the coastal zone reside for extended periods outside of the coastal zone, and therefore depend upon free passage within a watershed throughout their life history.

Del Norte County

The authorization is consistent with the relevant portions of the Del Norte County Local Coastal Program (LCP), which was certified by the Coastal Commission on October 12, 1983. It is due to the diversity in life history patterns of anadromous fish species that the Del Norte LCP acknowledges the importance of coastal streams and riparian vegetation systems as Sensitive Coastal Habitat, necessary to both the aquatic life and the quality of water courses. Under the LCP, Chapter VI, the following provisions are made:

> "The County shall maintain all existing species of fish, wildlife, and vegetation for their economic, intrinsic and ecological values as well as providing adequate protection of rare and endangered species." (App., p. 55)
>
> "The County should establish riparian corridors along local streams, creeks, and sloughs to maintain their aesthetic appeal, wildlife habitat, control of erosion. . . ." (App., p. 56)
>
> "The County encourages programs (*e.g.*, fish hatcheries, habitat rehabilitation) designed to improve the quality of coastal fisheries and other marine resources."

(App., p. 57)

> "All surface and subsurface waters shall be maintained at the highest level of quality to insure the safety of public health and the biological productivity of coastal waters." (App., p. 58)

Therefore, this recommendation's goal of improving anadromous fish habitat by removing barriers to fish passage, and providing access to historic habitat, thereby maintaining and enhancing the aquatic resources of the county, is consistent with the LCP.

Humboldt County

The authorization is consistent with the relevant portions of the Humboldt Bay Local Coastal Program (LCP), which was certified by the Coastal Commission on October 14, 1982, and which states:

> "The biological productivity and the quality of coastal waters, (and) streams . . . appropriate to maintain optimum populations of marine organisms . . . shall be maintained, and, where feasible, restored through . . . minimizing alteration of natural streams." (LCP, 3-55)

> "New development within stream channels shall be permitted when there is no less environmentally damaging feasible alternative, where the best feasible mitigation measures have been provided to minimize environmental effects, and shall be limited to . . . wetlands, fishery, and wildlife enhancement and restoration projects. . . ." (LCP, 3-56)

Because the proposed authorization will prepare for projects designed to re-create riparian habitat where it has been lost; restore the natural meander and in stream habitat of the project area; improve sediment flushing by restoring natural geomorphologic processes; and open up previously unavailable habitat; therefore the proposed authorization is entirely consistent with the LCP Policy stated above.

Mendocino County

This authorization is consistent with the relevant portions of the Coastal Element of the Mendocino County Land Use Plan (LUP)—part of Mendocino County's Local Coastal Program (LCP), which was certified by the Coastal Commission on September 10, 1992, and which states:

> "Channelization, dams, or other substantial alterations of rivers and streams shall be limited to . . . necessary water supply projects. . . . Where any of these uses are permitted the best feasible mitigation measures shall be incorporated into the development." (LUP Policy No. 3-1-9) The proposed authorization seeks to reverse the ecological consequences of ill-conceived construction projects completed prior to the adoption of the natural resource protection policies enumerated in the LUP generally, and in this policy specifically. By planning for the provision of fish passage facilities at dams and other barriers to fish passage, this authorization will begin to remove existing limitations to the historic range of commercially and socially important anadromous fish species, as well as other aquatic organisms, and set new standards for future compliance with this Policy. The proposed authorization is therefore consistent with, and will enhance the objectives of this policy.

> ". . . .No structure or development . . . which could degrade the riparian area or diminish its value as a natural resource shall be permitted in the Riparian Corridor except for . . . channelizations, dams or other substantial alterations of rivers and streams as permitted in Policy 3.1-9; pipelines utility lines and road crossings, when no less environmentally damaging alternative route is feasible. . . ." (LUP Policy No. 3-1-10). The proposed authorization seeks to reverse the ecological consequences of ill-conceived construction projects completed prior to the adoption of the natural resource protection policies enumerated in the LUP generally, and in this policy specifically. By planning for the replacement of outdated road crossings and other barriers to fish passage with new fish passage facilities, this authorization will begin to remove existing limitations to the historic range of commercially and socially important anadromous fish species, as well as other aquatic organisms, and set new standards for future compliance with this Policy. The proposed authorization is therefore consistent with, and will enhance the objectives of this policy.
>
> "The Mendocino Coast is an area containing many types of marine resources of statewide significance. Marine resources shall be maintained, enhanced, and, where feasible, restored; areas and species of special biologic or economic significance shall be given special protection; and the biologic productivity of coastal waters shall be sustained."
> (LUP Policy No. 3.1-25)

Whether within or outside of the coastal zone, the proposed authorization fits the general criteria and mandate of this policy by: 1) restoring marine resources such as anadromous fish which depend upon access to available habitat in coastal streams; 2) protecting areas of the Mendocino Coast and species there of special biologic or economic significance such as steelhead and coho salmon, both of which are species of both biologic and economic significance; and c) sustaining the biologic productivity of coastal waters by enabling anadromous fish to return to their spawning grounds. The proposed authorization is thus consistent with and implements Policy No. 3.1-25.

CONSISTENCY WITH LOCAL WATERSHED MANAGEMENT PLAN/ STATE WATER QUALITY CONTROL PLAN:

As required of a "coastal watershed protection" project proposed with funding from the Water Security, Clean Drinking Water, Coastal Beach Protection Fund of 2002 (Proposition 50), the proposed project is consistent with a local watershed management plan. All proposed projects are consistent with the local recommendations made in the 2004 Recovery Strategy For California Coho Salmon, with high priority projects identified in the Conservancy Inventory of Barriers to Fish Passage in Coastal Watersheds, and all projects are consistent with the goals and objectives of the Basin Plan for the North Coast region, which calls for protection and enhancement of coldwater fisheries as a beneficial use.

COMPLIANCE WITH CEQA:

Preparation of the intended designs and permitting involves only data gathering, planning, and feasibility analyses for possible future actions and is thus statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to 14 Cal. Code of Regulations Section 15262. Staff will file a Notice of Exemption upon approval.